Importance and Enforcement of Storm Water Regulations

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December 7, 2005

Purpose of this Presentation

To Discuss…

- Why EPA cares about Storm Water
- How EPA shares responsibility with States
- Enforcement trends and program development
- Penalty policy analysis and application
- Storm Water hot topics and compliance concerns

Why Do We Care About Storm Water Runoff?

When it rains, it drains…

- Impacts caused by quantity of runoff
  - Changes in Stream Hydrology
  - Stream Widening and Erosion
- Quality of runoff
  - Sediment
  - Nutrients
  - Pathogens
  - Temperature

Erosion/runoff is still the #1 source of nonpoint source pollution in the U.S.

Environmental Impact of Storm Water Discharges

- The *National Water Quality Inventory: 2000 Report (*Aug. 2002) states that:
  - 40% of assessed rivers, 45% of assessed lakes & 50% of assessed estuaries are not clean enough to meet basic uses (e.g., fishable, swimmable, drinkable)
  - Sediment/siltation is a leading **cause** of impairment:
    - the #2 cause of impairment for rivers and streams
    - the #3 cause of impairment for lakes, ponds, reservoirs
    - the leading cause degrading wetland integrity

Environmental Impact of Storm Water Discharges

- A primary source of sediment in storm water runoff is construction sites
- Sediment pollutes 21% of impaired lake areas (1.5 million acres) and 31% of impaired rivers and streams (84,503 river miles)

Impacts of Other Construction Site Discharges

Sources of other pollutants besides sediment include concrete washout areas and discharges of wash water, paint, and petrochemicals

- These can be discharged directly (non-storm water discharges) or in storm water runoff
- pollutants: high pH, high toxicity

Environmental Impact of Storm Water Discharges

- Increases sediment loads causing downstream bank erosion
- Impacts recreation (swimming/boating/fishing)
- Interferes with drinking water processes, increasing treatment costs and reducing storage capacity
- Impacts wetland value (e.g., habitat, hydrology)

Environmental Impact of Storm Water Discharges

Impacts of Sediment on Human Health and the Environment

- Inhibits fish spawning and growth (e.g., suffocates eggs)
- Suffocates bottom-dwelling aquatic organisms
- Increases turbidity: less light results in decline in submerged aquatic vegetation (habitat and food source)

Who Do the Regulations Apply to?

- Storm Water associated with Industrial Activity (33 U.S.C. § 402 (p)(2)(B))
- Storm Water associated with construction activity

  (40 C.F.R. §§ 122.26 (b)(14)(x) and (b)(15))
- Oil and gas exemption

  (33 U.S.C. § 402 (l)(2))

How EPA Shares Responsibility with States

- The CWA gives EPA the authority to authorize States to implement parts of the law, including storm water.
- States must have laws at least as stringent as EPA's regulations.
- The State agency is then the primary agency running the program.
- EPA may assist the State through work share agreements.
- EPA maintains concurrent authority under the CWA. EPA also maintains an oversight role.
- EPA and State requirements do not override or take the place of City or local requirements.

Storm Water Program Development and Expectations

- EPA 1994 Storm Water Enforcement Strategy
  - Identify non-filers
  - Expedite the issuance of Administrative Orders and Penalty Orders
- EPA 2000 Storm Water Enforcement Strategy Update
  - Shift from outreach and compliance assistance to targeting enforcement candidates as a means to compliance

Storm Water Program Development and Expectations

- EPA 2003 Storm Water Compliance and Enforcement Strategy
  - Sector-based enforcement model
  - Watershed-based enforcement model
  - Includes MS4s and small construction sites in enforcement priority

Storm Water Enforcement

- EPA selects from a “tool box” for compliance and enforcement
- Different tools are used depending upon the nature of the deficiencies and/or violations

Enforcement Tools

- Informal Enforcement (warning letters, notices of violation)
- Formal Enforcement
  - Administrative Order requiring compliance
  - Administrative Penalty Complaint
  - Civil Judicial Action in District Court

EPA Storm Water Enforcement Trends

- National Settlements
  - Wal-Mart settlement includes 24 sites addressing comprehensive injunctive relief and 3.1 million penalty
  - Region 8 has collected $426,256 from 12 companies for violating storm water regulations at 7 Colorado sites

Enforcement Trends

- Texas Independent Producers and Royalty Owners Assoc. v. EPA, ___ F.3d ___, 2005 WL 1406078 (5th Cir. 2005)
- Texas Independent Producers and Royalty Owners Assoc. v. EPA, 410 F.3d 964, 60 ERC 1513 (7th Cir. 2005)
- Environmental Defense Center v. EPA, 344 F.3d 832, 57 ERC 1039 (9th Cir. 2003), cert. denied, ___ U.S. ___ (2004)

Storm Water Penalty Analysis and Application

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Date: December 7, 2005

Statutory Maximum Penalty Overview

- Under the Clean Water Act (CWA), a person is liable for civil penalties of up **$32,500 per day for each violation** of the storm water general permit

- **$27,500 per day for each violation** occurring before March 15, 2004

Statutory Maximum Penalty Overview

- In determining a penalty, courts begin with statutory maximum and adjust that penalty using the following statutory factors (CWA 309(d)):
  - **Seriousness** of the violation
  - **Economic benefit** resulting from the violation
  - **History** of such violations
  - **Good faith efforts** to comply with the law
  - **Economic impact** of the penalty on the violator
  - Other factors as justice may require

Appropriate Settlement Penalty

- For purposes of settlement, EPA developed the 1995 Interim CWA Penalty Policy which incorporates the statutory factors in Section 309(d) and 309(g)(3)

- EPA calculates a penalty using the methodology in the Penalty Policy, not to exceed the statutory maximum penalty

1995 CWA Settlement Penalty Policy – Overview

Two Main Components:

- **Economic Benefit Component:** eliminates unfair economic advantage or benefit of noncompliance

- **Gravity Component**: must be large enough to deter noncompliance both specifically and generally

Economic Benefit Component

- The purpose of the economic benefit component is to place the violator in the same financial position they would have been in if they had complied on time, and to ensure violators do not gain an economic advantage over their competitors (level the playing field)

- Economic Benefit:
  - results from delaying or avoiding pollution control expenditures
  - is calculated for all avoided and delayed pollution control expenditures

Economic Benefit Component

- Standard method for calculating economic benefit is through application of EPA's computer model (BEN)
  - Input delayed/avoided costs and dates of noncompliance into BEN model
  - http://www.epa.gov/compliance/civil/programs/econmodels/index.html#models

Economic Benefit – Storm Water Cases

- Economic benefit in many construction storm water cases, is relatively low because:

  Compliance requires the design, installation, and maintenance of simple, low cost structures/devices (e.g., sedimentation basins, silt fences) and implementation of simple, non-structural BMPs (e.g., good housekeeping)

Gravity Component Overview

- The purpose of the gravity component is to **deter future noncompliance** by both:
  - Violator – Company in Violation (Specific Deterrence)
  - Other Potential Violators – Construction Industry at large (General Deterrence)
- Gravity should ensure that the violator is economically worse off than if he had obeyed the law

Gravity Component Overview

- Quantifies the seriousness of the violations in terms of impact or potential impact on human health and the environment, the number and significance of violations, and impact on integrity of the NPDES program
- Calculated for each month there was one or more violations
- The total gravity equals the sum of each monthly gravity component

Gravity Adjustment Factors

- **Recalcitrance:** Increase in gravity component based on bad faith; unjustified delay in preventing, remedying, mitigating violations; including failure to comply with previous enforcement actions

- **Ability to Pay:** violator must demonstrate that it is entitled to mitigation

- **Quick Settlement Reduction Factor:** a reduction of 10% is allowed for quick settlement

Supplemental Environmental Projects

- Supplemental Environmental Projects (SEPs) are environmentally beneficial projects which the violator undertakes and is not otherwise legally required to perform

- SEP can reduce **cash** amount of final penalty

- SEP must comply with Agency's SEP policy (http://www.epa.gov/compliance/civil/programs/seps)

Appropriate Civil Penalty CONCLUSIONS

- Penalty Amount is based on economic benefit and gravity, and adjusted for Recalcitrance ***and other appropriate adjustments to gravity***

- To assess recalcitrance and overall deterrence goal of the Penalty Policy we considered:
  - Significance of continuing noncompliance including scope and extent of violations
  - Previous enforcement actions
  - Impact of penalty on violator

- SEP can reduce the total cash amount of the penalty

Expedited Settlement Offer

- Released on (date)
- More information

Storm Water Hot Topics and Compliance Concerns

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Focus of this presentation

- Compliance Trends
- EPA Inspection Procedures
- Examples of Good and Problem Best Management Practices

Background

- EPA has regulated sites of 5 acres or more since 1990 (Phase I) and sites of 1 acre or more since 2003 (Phase II)

- EPA and states have performed extensive outreach to the regulated community concerning storm water requirements

Compliance Trends

- In one year, fewer than 1/3 of construction starts had permit coverage
- Of the sites that have permit coverage, there is significant non-compliance with permit requirements.

Common Violations

- No permit or expired permit (for multi-year projects)
- No storm water pollution prevention plan (SWPPP)

Common SWPPP violations

- Incomplete SWPPP
- SWPPP too generic
- SWPPP not implemented

Problems with BMPs

- Improper installation
- Improper selection
- Inadequate maintenance

Other Permit Violations

- Failure to conduct inspections at required frequency
- Failure to document inspections and other record keeping violations
- Poor housekeeping

EPA Inspection Procedures

- Inspections are generally unannounced
- May include State, County, and/or City personnel
- Opening Conference
- Records/Document Review
- Site Inspection
- Closing Conference

Opening Conference

- Introductions and presentation of credentials
- Purpose of the inspection
- Discussion of plan for inspection (records review, site inspection, closing conference)

Records/Document Review

- Review of storm water permit coverage
- Review of storm water pollution prevention plan
- Review of facility inspection records
- Review of other facility records (precipitation records, training records, etc.)

Site Inspection

- Observation of installation and maintenance of BMPs
- Comparison of BMPs to the Storm Water Pollution Prevention Plan
- Observation regarding effectiveness of BMPs
- General site control issues (run-on controls, uncontrolled areas, etc.)

Closing Conference

- Summary of Inspection Observations
- Discussion of next steps (report, etc.)
- Compliance assistance materials may be provided if relevant to site and site observations

Best Management Practices


Site entrance:
No off-site tracking controls
Northern Trust
751-2500
Model
Now Av


Site entrance stabilized with Rock – Partially Effective


Site entrance:
Stabilization with Rock - Effective
5 16 2002

Site Entrance Sediment Controls: Truck Wash/Drain

Entrance Sediment Controls: Wheel Wash

No control in place to keep sediments on site


Erosion Controls:
Surface Roughening – Partly Effective
Best in Combination w/other BMPs

Erosion Controls: Mulch

- **Must be applied very thickly to be effective – if you can see the soil, it's not working**

Erosion Controls: Erosion Control Blankets (Here: Straw Matting)

- May be much more effective than mulch on steeper slopes & in windy areas


Improperly Installed Silt Fence


Silt Fence Doing Its Job,
But Not Being Maintained


A well-installed silt fences

Well-planned concrete washout area…

Unprotected inlet

Another unprotected inlet – urban area

Compliance Assurance Tools

- Compliance Assistance (work shops, phone calls, web site, compliance assistance center, on-site compliance assistance)
- Information gathering to determine compliance (inspections, requests for information)
- Compliance Assurance (follow up to inspection reports, re-inspection, etc.)

Storm Water Information

- http:/cfpub.epa.gov/npdes/stormwater/cgp,cfm
  - Construction general permit
- http:/cfpub.epa.gov/npdes/stormwater/swppp.cfm
- http:/cfpub.epa.gov/npdes/fag.cfm
  - Frequently Asked Questions
    - When to get a permit
    - Who needs to get a permit

Region 8 Storm Water Technical Contacts

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